

by Ltjg. Ben Lien

It was a beautiful day in the eastern Atlantic, just west of the Strait of Gibraltar. The weather was broken at 2,000 to 3,000, just good enough for a case one pattern with a cloud layer in the middle. We were returning from a BAM flight, one of the few opportunities for us to forget about antenna steering and maneuver the airplane.

Flying the pattern was uneventful, despite the clouds at the top of the stack. We managed to find our interval as we passed over some holes in the clouds, where we could answer the question, "Where is everybody?" It turned out that everyone else was below the clouds, trying to see what was going on.

Once we were below the clouds, we were able to see a section of Hornets and verify that we had the correct interval. After one more trip around the circle, we descended to the initial and broke at two miles upwind.

Once on downwind, the pilot put down the gear and flaps. On the Prowler, as the flaps come

down, the horizontal stabilizer is supposed to "shift," increasing pitch authority at slow speeds. If it doesn't shift, NATOPS warns that you might not have sufficient pitch authority to maintain level flight below 200 knots.

My first indication that the stab wasn't shifting was when the pilot said, "Still waiting on the stab. I'm keeping it above two hundred knots." Strike one for me: the ECMO is supposed to watch the integrated position indicator (IPI) as the stab shifts.

I looked over, expecting to see a barberpoled stabilizer on the IPI, but saw a solid background. "Shifted," I said to the pilot.

"No, it's still clean," he replied. I had seen a black background on the IPI, and made the mistake of seeing what I expected. Strike two for me. A shifted stab has a white background, just like the flaps-and-slats-down indicators to either side of it. If the pilot hadn't caught my error, we could have slowed into an uncontrollable descent. That's why they teach crew coordination.

Seeing What You Want To See



Crew coordination helped again a moment later, when I passed control of the radios to the back seat so I could read the checklist. At the time, it seemed like a lot of time had gone by without me doing anything helpful. ECMO 3 explained our problem to tower while the pilot and I stepped through the checklist.

The checklist called for pulling the flaps-slats circuit breaker, which is number 2 on row 4 of the pilot's circuit-breaker panel. I had written the location of each CB in my checklist next to the step that called for it when I was a RAG student. This was the first time I had needed the information, but it was worth the little effort it had taken to have it ready. Later, the pilot commented that it would have been hard to find that circuit breaker and fly if it had been night. Having the location ready for him minimized the time he had to spend with his head down reading circuit-breaker labels.

The pilot turned on the assisted-spin-recovery switch, which shifted the stab as advertised. He reset the circuit breaker, completing the checklist,

then hooked in at six miles for a straight-in to a normal landing.

Once in the wires, the wings cleaned up normally. I was ready to fold the wings when the pilot pointed out that the less stuff we moved, the less damage we'd do.

In retrospect, leaving the flaps down after landing would have been even better. The maintainers later told us that moving the flaps could have wound up the broken end of the cable, requiring an engine drop to retrieve it. In our case, the cable had broken in a place where it could be reached fairly easily.

The Prowler community has had a few prior occasions of stab shift failure, some with considerable loss of altitude before corrective measures were taken. When this problem crops up, it only becomes severe if it goes unnoticed. Our crew's awareness of these prior incidents and their potential consequences allowed us to catch this problem before we were threatened. Or perhaps we'd been threatened the whole time—after all, it was an emergency. 🦅

Ltjg. Lien flies with VAQ-140.

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